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Performance of Pastured Beef Study

Project #: 1996-C

Cooperator: Ulla De Bruijn, Ponoka
Don & Randee Halladay, Rocky Mountain House

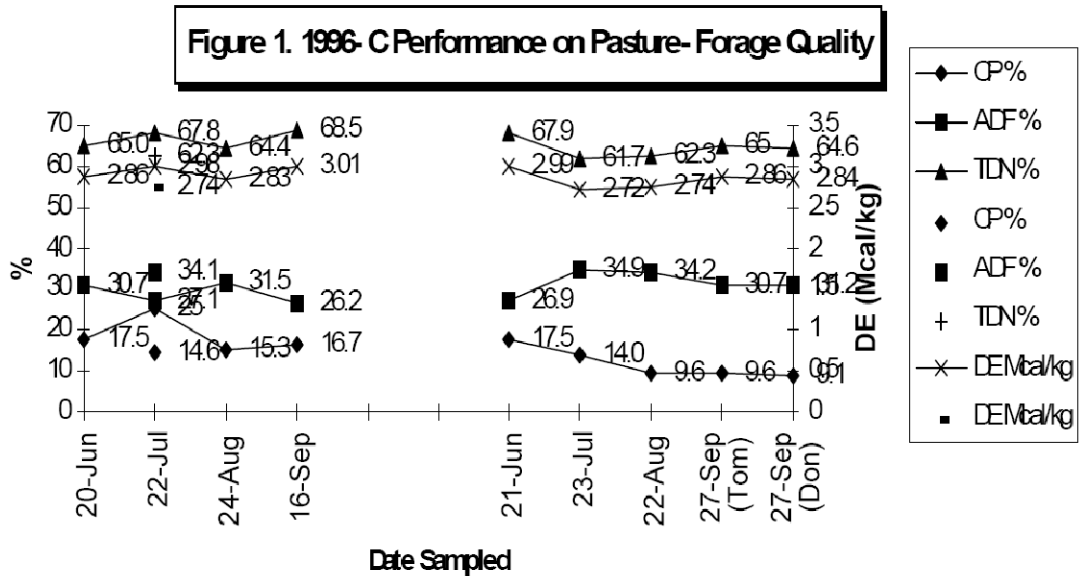
Sponsor: Grey Wooded Forage Association

Objective: Explore what are some of management techniques to finish beef cattle on perennial forage crops in Central Alberta.

Background:
There is considerable interest in the area of management of perennial pastures which can produce high rates of gain with minimal to no grain feeding and still finish slaughter animals. As other countries (Argentina, New Zealand) are coming on-line with less trade barriers and producing cheaper products our grass management will have to improve if Canadian producers want to stay competitive in a global market.

Action Plan:
-Randomly select yearling animals, have them tagged for identification purposes.
-Take initial and monthly weights to determine average daily gain (ADG) on pasture.
- Condition score individual animals before entering pasture and after pulled off pasture. Frame score individual animals to put into classes.
-Forage sampling on a biweekly or weekly basis to track nutritional quality of the stands.
-Yields clips will be taken to determine overall forage production in the grazing season.

Results:
Feed quality was monitored in the same way as in the project with Jan Slomp, by taking grab samples of forage along the temporary fence and attempting to take what the cattle are eating. Figure 1 shows the trend in the pasture over the growing season. In Ulla.s sample on July 22 we also sampled what the cow/calf pairs that were following the yearling heifers. This leader -follower management allows higher requirement animals (yearling heifers) better quality and the lower requirement animals (cow/calf pairs) a lower quality but still adequate for a lactating beef cow. The ADF% of the forage that the heifers were grazing was 27.1% and the ADF% for the Cow/calf pairs was 34.1%. Also the crude protein for the heifers was 25 % and for the cows was 14.6 % which is adequate for lactating beef cows and growing calves.



We also monitored animal performance with weighing. At Ulla.s the animals were weighted monthly and at Don.s they were weighted at turnout and when they shipped out. The results below shows the performance of the two herds.

Table 1

Summary of Performance- Don Halladay

Total Acres Grazed	731	
Grazing Period	112	**Days**
No. of Animals	400	Yearling Steers
Stocking Rate	1 Steer/1.86 acres	
Total Rainfall	47 cm (18.5 inches)	
ADG	**2.17**	**Lbs./day**
Average Initial Weight	591	Lbs.
Average Closing Weight	826	Lbs.
Average Total Gain	235	Lbs.

Summary of Performance- Ulla De Bruijn

Total Acres Grazed	400	
Grazing Period	121	Days
No. of Animals	136	Yearling Heifers
Stocking Rate		
Total Rainfall	43 cm (17 inches)	

Animal Performance

	18-May	22-Jun	16-Jul	23-Jul	16-Aug	16-Sep
Average Weight	612	694	763	848	NA	878
# of animals	136	136	136		52	
ADG		2.4	2.9	2.8	3.3	2.6
# of Animals Sold				82		52
Days on Grass				65		121
Average Total Gain				180		314

Discussion:

In Don Halladay's herd there was comprised of three herds two were custom grazed and the other Don owned. On certain paddocks there were 54 ADA.s (*). These paddocks were designated for Fall and Spring pasture for Don's cow herd. These paddocks were only grazed once to allow for maximum forage regrowth. Other paddocks received 90 ADA.s; these paddocks were grazed twice throughout the grazing season. The recovery periods for the paddocks with 90 ADA.s was 72 days.

In Ulla's case there was the 136 yearling heifers (owned) and the 157 cow/calf pairs (custom grazed). Some of the interesting results that came out of the study was the effect of selling off the heavier end of 82 head in July. The result was a better production of that lighter end for the next 56 days that their average total gain was 43% greater than the first group. This also led Ulla to summarize that she needs to gain over 200 pounds /animal to be profitable. Also, the profit /acre for 1996 was $94.66 comparing that to 1995 it was $45.60. The price /pound of gain for 1996 was $0.73 as opposed to 1995 where is was $0.18 due to the negative margin in cattle prices. The rest periods for the paddocks was 30 days and 60 days. This resulted in 111 ADA.s on most of the paddocks which were grazed about three times throughout the grazing season.

*** Animal Days per Acre (ADA)= <u># of animals X # of days grazing</u>**
# of acres grazed

This formula is used to indicate the volume of forage that was grazed over a certain time (grazing season). This can be calculated on a specific paddock or over the entire farm. In this particular project the ADA.s will replace typical yield data, simply because the amount of forage production will reflect how much grazing you can achieve on a certain paddock or over the entire farm.